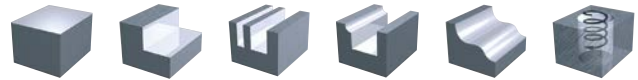
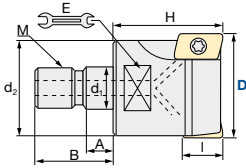


AHUM | High-Feed Ultra End Mill Modular


Q max High Efficient	▽ Roughing	No. of Teeth 2-5
--------------------------------	----------------------	----------------------------

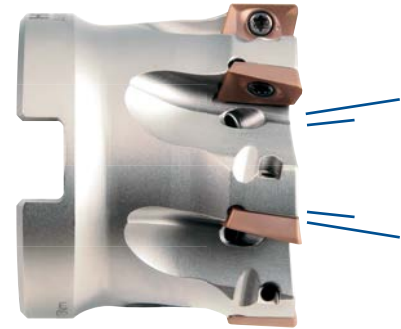
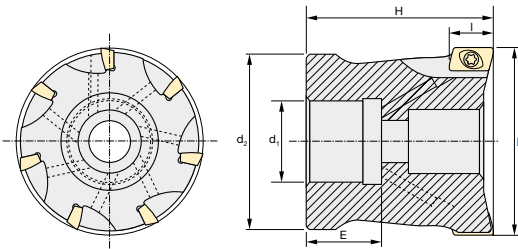


Diameter Holder only [mm]	Fastening Torque [Nm]
-0.1/-0.2 mm	1.3 Nm

Modular Type												
ID Code	Item Code	Flutes	D	l	H	d ₁	M	d ₂	A	B	E	Inserts
FH 525	AHUM-1016R-2	2	16	9	25	8.5	M8	13	5.5	16	10	JDMT-1003-R../-FW JDET-1003-R../-FA
FH 526	AHUM-1020R-3	3	20		30	10.5	M10	18		18	15	
FH 527	AHUM-1025R-4	4	25		35	12.5	M12	21		20	17	
FH 528	AHUM-1032R-5	5	32		40	17	M16	29	6	22	22	

AHUB | High-Feed Ultra Bore Type

Q max High Efficient	▽ Roughing	No. of Teeth 6-8
--------------------------------	----------------------	----------------------------

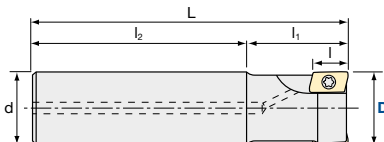


Diameter Holder only [mm]	Fastening Torque [Nm]
-0.1/-0.2 mm	1.3 Nm

Bore Type										
ID Code	Item Code	Flutes	D	l	H	d ₁	d ₂	E	Inserts	
FH 534	AHUB-1040RM-6	6	40	9	40	16	32	19	JDMT-1003-R../-FW JDET-1003-R../-FA	
FH 535	AHUB-1050RM-7	7	50			22	47	20		
FH 536	AHUB-1063RM-8	8	63							

AHU | High-Feed Ultra End Mill

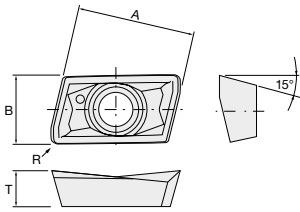
Q max High Efficient	▽ Roughing	No. of Teeth 2-5
--------------------------------	----------------------	----------------------------



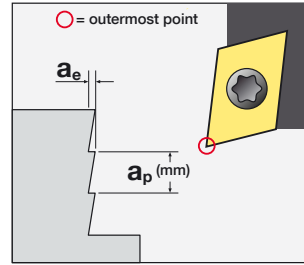
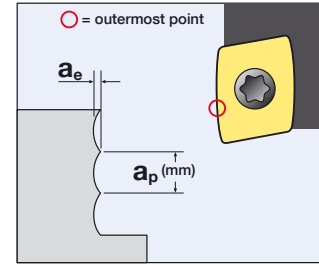
Diameter Holder only [mm]	Fastening Torque [Nm]
-0.1/-0.2 mm	1.3 Nm

Shank Type										
ID Code	Item Code	Flutes	D	l	l ₁	l ₂	L	d	Inserts	
FH 506	AHU-1016R-2	2	16	9	30	70	100	16	JDMT-1003-R../-FW JDET-1003-R../-FA	
FH 507	AHU-1020R-3	3	20			80	110	20		
FH 508	AHU-1025R-4	4	25		35	85	120	25		
FH 509	AHU-1032R-5	5	32		45		130	32		

ASC | Carbide Shanks for Modular Mills & **AS** | Steel Shanks for Modular Mills: page 4

INSERTS | Improved cutting surface


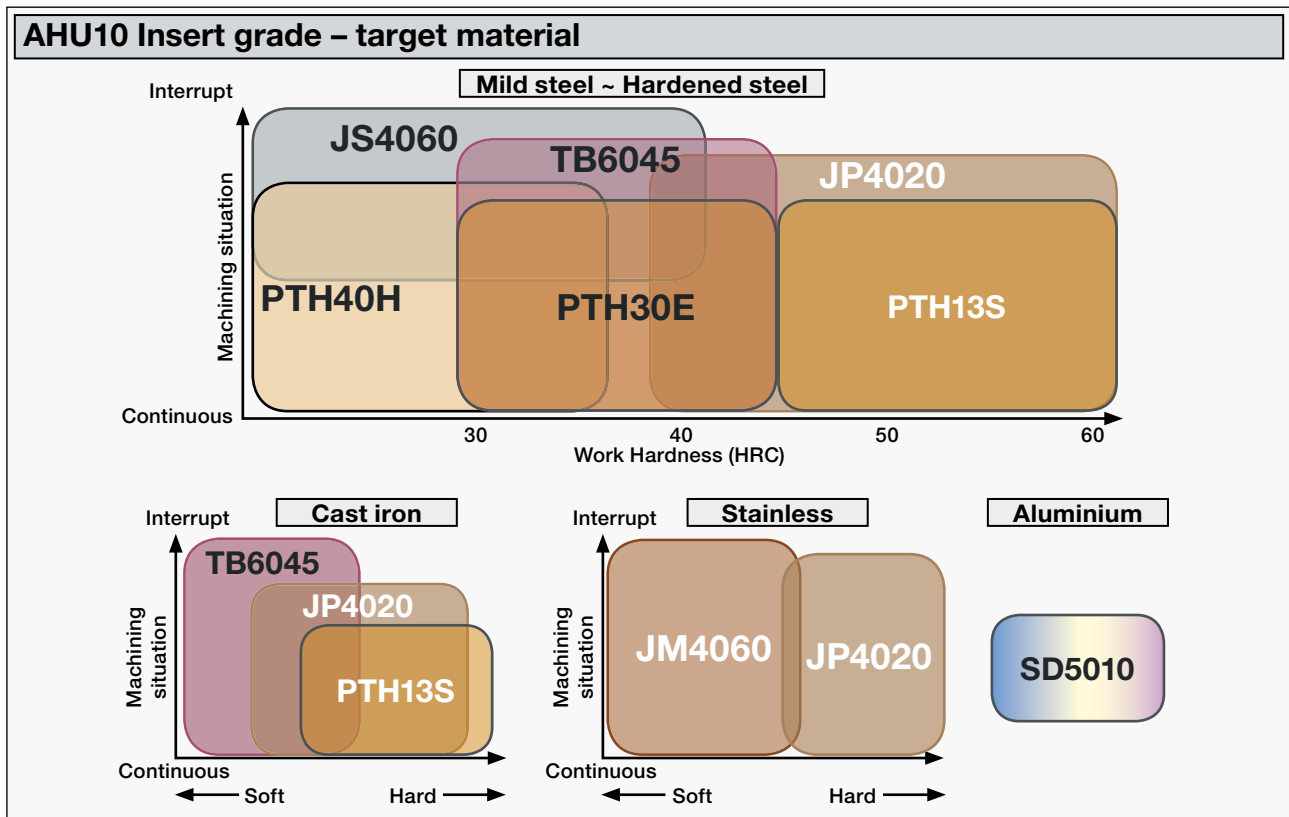
Conventional (JDMT.....R)




 Fine Wall type **JDMT.....R-FW**


← **Soft** Target Hardness of Workpiece **Hard** →

Inserts	Tolerance Class	Corner-R	Grade							Size (mm)			
			SD5010	JM4060	JS4060	PTH40H	PTH30E	TB6045	PTH13S	JP4020	A	B	T
Item Code			ID-Code										
JDMT-1003-R04	M	0.4					WF633	WF634	WF637		11	6.1	3.5
JDMT-1003-R04-FW		0.4-FW		WF696						WF695			
JDMT-1003-R08		0.8		WF702	WF701	WF636	WF631	WF635	WF638	WF700			
JDMT-1003-R08-FW		0.8-FW		WF699	WF698					WF697			
JDMT-1003-R20		2.0		WF705	WF704		WF632			WF703			
JDET-1003-R04-FA	E	0.4-FA	WF706										

SD5010 PVD · DLC coated grade for Aluminium	PTH30E PVD · General steels for 30–40 HRC
JM4060 PVD · For stainless steels & carbon steels < 35HRC	TB6045 PVD · General steels for 30–40 HRC / Recommended for dry cutting
JS4060 PVD · For carbon steels < 35HRC	PTH13S PVD · For pre-hardened steels 40–55 HRC
PTH40H PVD · For carbon steels < 35HRCA	JP4020 PVD · For pre-hardened steels 40–55 HRC

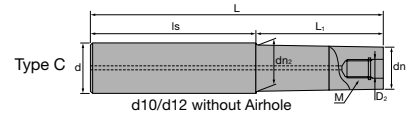
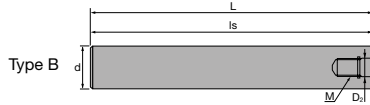
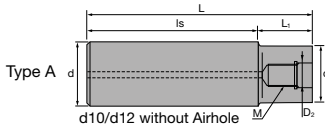


Clamp Screw		Wrench	
			
ID Code	Item-Code	ID Code	Item-Code
ET175	250-141	ET013	104-T8

Cutting Conditions | Schnittwerte | Condizioni di taglio | Condiciones de Corte | Conditions de coupe | Valores de corte:
 D 16 (Z2) – D 63 (Z8): Page 6–7



ASC | Carbide Shanks for Modular Mills

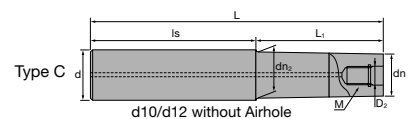
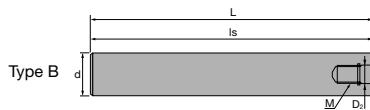
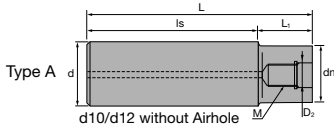


		Carbide Shank											
		ID Code	Item Code	D ₂	M	L	L ₁	L _s	dn	dn ₂	d	Type	
Without Airhole	FH137	ASC10-6.5-74-24		6.5	M6	74	24	50	9.3	-	10	A	
	FH254	ASC10-6.5-84-34				84	34						
	FH255	ASC10-6.5-114-24				114	24						90
	FH138	ASC10-6.5-114-49				74	24	50					
	FH139	ASC12-6.5-74-24				94	44	50					
	FH256	ASC12-6.5-94-44				24	105						
	FH257	ASC12-6.5-129-24				129	24	105					
	FH140	ASC12-6.5-129-64				64	65						
With Airhole	FH141	ASC16-8.5-95-30		8.5	M8	95	30	65	14.5	15.5	16	C	
	FH258	ASC16-8.5-120-55				120	55						
	FH142	ASC16-8.5-140-75				140	75						
	FH260	ASC16-8.5-160-30				160	30						130
	FH259	ASC16-8.5-160-95				160	95						65
	10.5	FH143	ASC20-10.5-120-50		10.5	M10	120	50	70	18	-	20	A
		FH261	ASC20-10.5-170-90Z				170	90	80	18.5	19.5		C
		FH144	ASC20-10.5-220-50				220	50	170	18	-		A
		FH262	ASC20-10.5-220-120Z				220	120	100	18.5	19.5		20
		FH263	ASC20-10.5-270-150Z				270	150	120				
		FH264	ASC20-10.5-270-50Z				270	50	220				
		FH145	ASC25-12.5-145-65				145	65	80			23	
		FH146	ASC25-12.5-265-65				265	65	200				
	FH265	ASC25-12.5-215-115		215	115	100							
	FH266	ASC25-12.5-265-145		265	145	120							
	FH268	ASC25-12.5-315-65		315	65	250							
	FH267	ASC25-12.5-315-195		315	195	120							
	17	FH147	ASC32-17-160-80		17	M16	160	80	80	28	-	32	A
		FH269	ASC32-17-260-140				260	140	120				
		FH148	ASC32-17-310-80				310	80	230				
FH270		ASC32-17-360-240		360			240	120					

- 🇬🇧 SUPER Lock milling chucks or shrink-fit holders can be used.
- 🇩🇪 SUPER Lock Aufnahmen oder Schrumpffutter können verwendet werden.
- 🇮🇹 Possono essere utilizzati mandrini a forte serraggio SUPER Lock.

- 🇪🇸 Aptos para amarrar en portapinzas SUPER Lock.
- 🇫🇷 Les attachements SUPER Lock peuvent être utilisés.
- 🇵🇹 Cones hidráulicos de grande aperto e aperto térmico podem ser usados.

AS | Steel Shanks for Modular Mills



		Steel Shank										
		ID Code	Item Code	D ₂	M	L	L ₁	L _s	dn	dn ₂	d	Type
Without Airhole	FH131	AS10-6.5-74-0		6.5	M6	74	-	74	-	-	10	B
	FH132	AS12-6.5-84-4				84	4	80	11	-	12	A
With Airhole	FH133	AS16-8.5-95-15		8.5	M8	95	15	80	14.5	15.5	16	C
	FH134	AS20-10.5-100-20		10.5	M10	100	20		18	-	20	A
	FH271	AS25-12.5-115-35		12.5	M12	115	35		23	23	25	
	FH272	AS32-17-110-30		17	M16	110	30		28	28	32	

- 🇬🇧 SUPER Lock milling chucks can be used.
- 🇩🇪 SUPER Lock Aufnahmen können verwendet werden.
- 🇮🇹 Possono essere utilizzati mandrini a forte serraggio SUPER Lock.

- 🇪🇸 Aptos para amarrar en portapinzas SUPER Lock.
- 🇫🇷 Les attachements SUPER Lock peuvent être utilisés.
- 🇵🇹 Cones hidráulicos de grande aperto e aperto térmico podem ser usados.



AHUM | High-Feed Ultra End Mill Modular

- For further information about Modular Chucks please see our brochure *Indexable Modular Series No. 328*
- Weitere Informationen über Modulare Werkzeugaufnahmen finden Sie in unserem Prospekt *Indexable Modular Series No. 328*
- Per maggiori informazioni riguardanti la gamma dei mandrini avvitabili consultate il catalogo *Indexable Modular Series No. 328*
- Para obtener más información sobre conos modulares consulte nuestro folleto *Indexable Modular Series No. 328*
- Pour de plus amples informations concernant les attachements modulaires, voyez SVP notre brochure *Indexable Modular Series No. 328*
- Para mais informações sobre Cones Modulares consulte o nosso folheto *Indexable Modular Series No. 328*



AHU + AHUM + AHUB | Recommended Cutting Conditions

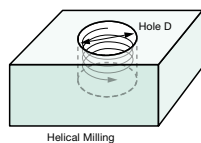
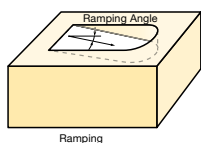
- 1. Please choose the best conditions from the table
 - 2. Reduce feed rate by 30% from the above table for slotting operations
 - 3. To reduce tool breakage index the inserts earlier than the maximum edge life
 - 4. Chips can become hot and can cause burns or damage to eyes. Please ensure machine guards are used, and safety specs and gloves worn at all times when carrying out work near to the tool or work-piece
 - 5. Please ensure caution when using neat cutting oil due to the risk of fire
- 1. Bitte wählen Sie aus der Tabelle die für Ihre Anwendung am besten geeigneten Bedingungen
 - 2. Für Nutenbearbeitungen sollte der Vorschub um 30% reduziert werden
 - 3. Um die Gefahr des Werkzeugbruchs zu reduzieren, sollten die Wende-schneidplatten gewechselt werden, bevor die maximale Standzeit der Schneide erreicht ist
 - 4. Die während der Bearbeitung entstehenden Späne können sehr heiß werden und können zu Verbrennungen oder Verletzungen von Haut und Augen führen. Bitte stellen Sie sicher, dass während der Bearbeitung die Maschinentüren geschlossen sind. Bei Arbeiten in der Nähe oder direkt am Werkzeug oder Werkstück, sollten immer eine Schutzbrille und Handschuhe getragen werden
 - 5. Erhöhte Vorsicht ist geboten beim Einsatz von purem Schneidöl, da es sich während der Bearbeitung entzünden kann
- 1. Scegliere le condizioni migliori della tabella indicata.
 - 2. Ridurre l'avanzamento (mm/min) di circa 30% da questa tabella per esecuzioni di cave dal pieno
 - 3. Per evitare la rottura dell'utensile cambiate l'inserto prima di arrivare all'usura massima.
 - 4. I trucioli possono essere molto caldi durante il lavoro. Usate sempre i mezzi di sicurezza (Occhiali, guanti, vetri di sicurezza...) durante il lavoro vicino all'utensile o al materiale.
 - 5. Attenzione al rischio di fiamma se durante il lavoro usate refrigerante a base di olio.

- 1. Veuillez choisir les conditions de coupes les mieux adaptées grâce au tableau.
 - 2. Pour des opérations de rainurage, il faut réduire de 30% les avances énoncées dans le tableau ci-dessus.
 - 3. Pour réduire les risques de rupture de l'outil, changez l'insert avant d'avoir atteint la durée de vie maximale de l'arrête de coupe.
 - 4. Les copeaux peuvent devenir chauds et causer des lésions oculaires ou des brûlures. Veuillez vous assurer que les protections de la machines sont correctement utilisées, et que des lunettes et des gants soient portés pour tout travail à proximité de l'outil ou de la pièce à usiner.
 - 5. Prenez vos précautions lors d'utilisation d'huiles de coupes à cause des risques d'incendie
- 1. Seleccionar las condiciones de la tabla de indicada
 - 2. En operaciones de ranurado hay que reducir el avance un 30%.
 - 3. Para reducir el riesgo de rotura de la herramienta hay cambiar la plaquita antes de agotar la vida máxima del filo
 - 4. Las virutas pueden saltar candentes y pueden causar quemaduras o daño en los ojos.
 - 5. Por favor, asegúrese de cerrar las protecciones de la máquina y de que son utilizados gafas y guantes en todo momento al realizar trabajos cerca de la herramienta o la pieza.
 - 6. Por favor, tome precaución al utilizar aceite de corte debido al riesgo de ignición.
- 1. Escolha as melhores condições da tabela
 - 2. Reduzir o avanço em 30% da tabela em cima em operações de rasgos
 - 3. Para evitar que a ferramenta se destrua substituir as plaquetas mais cedo que o seu desgaste limite.
 - 4. As aparas quentes podem provocar queimaduras ou danos nos olhos, verifique se as protecções da máquina são usadas e todas as especificações de segurança são respeitadas perto da máquina e ferramenta.
 - 5. Cuidado ao utilizar óleo de corte puro, devido ao risco de incêndio.

Ramping / Helical Milling

- Ramping**
Ramping is possible please use the following data for direct milling without pre-drilling any starter holes.
- Fräsoperationen über Rampe**
Für Fräsoperationen über Rampe nutzen Sie bitte die nachfolgend abgebildeten Schnittwerte für die direkte Bearbeitung ohne Startlochbohrung.
- Lavorazioni in rampa**
È possibile lavorare in rampa senza alcun preforo. Usate per questa lavorazione i seguenti dati.

- Rampa**
El mecanizado en rampa es posible. Por favor, utilizar las condiciones siguientes para mecanizado directo sin pretaladrado.
- Usinage de rampes**
Cette application est possible, utilisez, les données suivantes pour un fraisage direct, sans avant trou.
- Rampa**
A fresagem em rampa é possível. Por favor utilizar as condições seguintes em maquinação directa sem pré-furo.



Tool Diameter D mm	D 16	D 20	D 25	D 32	D 40	D 50	D 63
Max Ramp Angle°	4°	3°	2.5°	2°	1.5°	1°	1°
Hole D (mm)	21~29	29~37	39~47	53~61	68~80	85~100	107~126